* * * * * * * * * * * * * * * * STN Columbus

FILE 'HOME' ENTERED AT 09:48:27 ON 16 DEC 2003

=> file reg

=> d 11

L1 HAS NO ANSWERS L1 STR

Structure attributes must be viewed using STN Express query preparation.

=> s 11 full

5 SEA SSS FUL L1

=> file ca

=> s 13

1 L3

=> d ibib abs hitstr

ANSWER 1 OF 1 CA COPYRIGHT 2003 ACS on STN

ACCESSION NUMBER:

134:17486 CA

TITLE:

Preparation of optically active 7-(pyrrolidin-1-

yl)quinolinecarboxylates and -

naphthyridinecarboxylates as antibacterials.

INVENTOR(S):

Yoon, Sung June; Chung, Yong Ho; Lee, Chi Woo; Lee, Jin Soo; Kim, Nam Doo; Jin, Yoon Ho; Song, Wan Jin; Kim, Ik Hoe; Yang, Wang Yong; Choi, Dong Rack; Shin, Jung Han

PATENT ASSIGNEE(S):

Dong Wha Pharm. Ind. Co., Ltd., S. Korea

SOURCE:

PCT Int. Appl., 74 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

OTHER SOURCE(S):

Me

GI

DATE PATENT NO. KIND DATE CATION NO. ______ 20001136 WO 2000-KR487 20000518 WO 2000071541 Α1 AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, W: AE, AG, AL, AM CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG 20020320 EP 2000-927899 20000518 EP 1187835 A1 R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO JP 2000-619797 JP 2003500406 T2 20030107 20000518 AU 757272 B2 20030213 AU 2000-46209 20000518 US 6649763 В1 20031118 US 2001-979644 20011116 PRIORITY APPLN. INFO.: KR 1999-18158 Α 19990520 KR 2000-24657 20000509 Α WO 2000-KR487 W 20000518

MARPAT 134:17486

Ι

 $\begin{array}{c|c} & Y & O \\ \hline F & & \\ \hline RON & & \\ H_2N & & \\ \end{array}$

Title compds. (I; Q = CH, CF, CCl, N; Y = H, NH2; R = alkyl, allyl, PhCH2), were prepd. Thus, (+)-7-(4-aminomethyl-4-methyl-3-oxopyrrolidin-1-yl)-1-cyclopropyl-6-fluoro-4-oxo-1,4-dihydro-1,8-naphthyridine-3-carboxylic acid hydrochloride (prepn. given) was stirred with methoxylamine hydrochloride in pyridine for 4 h to give 97.5% (-)-7-(4-aminomethyl-4-methyl-3-(Z)-methoxyiminopyrrolidin-1-yl)-1-cyclopropyl-6-fluoro-4-oxo-1,4-dihydro-1,8-naphthyridine-3-carboxylic acid hydrochloride. This showed a min. inhibitory concn. of 0.025 .mu.g/mL against Streptococcus pyogenes 308A.

IT 309762-48-9P 309762-49-0P 309762-50-3P 309762-51-4P 309762-52-5P

309762-51-4P 309762-52-5P

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(prepn. of optically active 7-(pyrrolidin-1-yl)quinolinecarboxylates and -naphthyridinecarboxylates as antibacterials)

RN 309762-48-9 CA

CN 1,8-Naphthyridine-3-carboxylic acid, 7-[(4Z)-3-(aminomethyl)-4-

10/600,631

(methoxyimino)-3-methyl-1-pyrrolidinyl]-1-cyclopropyl-6-fluoro-1,4-dihydro-4-oxo-, monohydrochloride, (-)- (9CI) (CA INDEX NAME)

Rotation (-).

Double bond geometry as shown.

● HCl

RN 309762-49-0 CA

CN 1,8-Naphthyridine-3-carboxylic acid, 7-[(4Z)-3-(aminomethyl)-4-(ethoxyimino)-3-methyl-1-pyrrolidinyl]-1-cyclopropyl-6-fluoro-1,4-dihydro-4-oxo-, monohydrochloride, (+)- (9CI) (CA INDEX NAME)

Rotation (+).

Double bond geometry as shown.

● HCl

RN 309762-50-3 CA

CN 1,8-Naphthyridine-3-carboxylic acid, 7-[(4Z)-3-(aminomethyl)-4-[(1,1-dimethylethoxy)imino]-3-methyl-1-pyrrolidinyl]-1-cyclopropyl-6-fluoro-1,4-dihydro-4-oxo-, monohydrochloride, (+)- (9CI) (CA INDEX NAME)

Rotation (+).

Double bond geometry as shown.

● HCl

RN 309762-51-4 CA

CN 1,8-Naphthyridine-3-carboxylic acid, 7-[(4Z)-3-(aminomethyl)-3-methyl-4[(phenylmethoxy)imino]-1-pyrrolidinyl]-1-cyclopropyl-6-fluoro-1,4-dihydro4-oxo-, monohydrochloride, (+)- (9CI) (CA INDEX NAME)

Rotation (+).
Double bond geometry as shown.

● HCl

RN 309762-52-5 CA

CN 1,8-Naphthyridine-3-carboxylic acid, 7-[(4Z)-3-(aminomethyl)-3-methyl-4-[(2-propenyloxy)imino]-1-pyrrolidinyl]-1-cyclopropyl-6-fluoro-1,4-dihydro-4-oxo-, monohydrochloride, (+)- (9CI) (CA INDEX NAME)

Rotation (+).
Double bond geometry as shown.

● HCl

REFERENCE COUNT:

THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

=> file uspatfull

=> s 13

L5 1 L3

=> d ibib abs

L5 ANSWER 1 OF 1 USPATFULL on STN

ACCESSION NUMBER:

2003:302937 USPATFULL

TITLE:

Optically active quinoline carboxylic acid derivatives

with 7-pyrrolidine substituents causing optical activity and a process for the preparation thereof

INVENTOR(S):

Yoon, Sung June, Seoul, KOREA, REPUBLIC OF Chung, Yong Ho, Kyunggi-do, KOREA, REPUBLIC OF Lee, Chi Woo, Kyunggi-do, KOREA, REPUBLIC OF Lee, Jin Soo, Kyunggi-do, KOREA, REPUBLIC OF Kim, Nam Doo, Inchon-si, KOREA, REPUBLIC OF Jin, Yoon Ho, Seoul, KOREA, REPUBLIC OF Song, Wan Jin, Seoul, KOREA, REPUBLIC OF Kim, Ik Hoe, Suwon-si, KOREA, REPUBLIC OF

Yang, Wang Yong, Kyunggi-do, KOREA, REPUBLIC OF Choi, Dong Rack, Kyunggi-do, KOREA, REPUBLIC OF Shin, Jung Han, Kyunggi-do, KOREA, REPUBLIC OF Dong Wha Pharm. Ind. Co., Ltd., KOREA, REPUBLIC OF

PATENT ASSIGNEE(S): Dong Wha Pharm. Ind. C (non-U.S. corporation)

NUMBER KIND DATE

PATENT INFORMATION: VS 6649763 B1 20031118
WO 200007/1541 20001130

APPLICATION INFO:: US 2001 979644 20011116 (9)
WO 2000-KR487 20000518

NUMBER DATE

PRIORITY INFORMATION:

KR 1999-18158 19990520

KR 2000-24657 20000509

DOCUMENT TYPE: Utility FILE SEGMENT: GRANTED

PRIMARY EXAMINER: Morris, Patricia L.

LEGAL REPRESENTATIVE: Muserlian, Lucas and Mercanti, LLP

NUMBER OF CLAIMS: 8 EXEMPLARY CLAIM: 1

NUMBER OF DRAWINGS: 0 Drawing Figure(s); 0 Drawing Page(s)

LINE COUNT: 1332

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

The present invention relates to optically active quinoline carboxylic acid derivatives, their pharmaceutically acceptable salts, their solvates, and a process for the preparation thereof. More specifically, the present invention relates to optically active quinoline carboxylic acid derivatives containing 4-aminomethyl-4-methyl-3-(Z)-alkoxyirninopyrrolidine substituents causing optical activity at the 7-position of the quinolone nuclei. As the compounds of the present invention have superior antibacterial activity and pharmacokinetic profiles to their enantiomers, their racemates and conventional antibacterial agents, with nearly no phototoxicity, the compounds of this invention are useful for antibacterial agents.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

=> file marpat

=> s 11 full

L6 2 SEA SSS FUL L1

=> d ibib abs fqhit 1-2

L6 ANSWER 1 OF 2 MARPAT COPYRIGHT 2003 ACS on STN

ACCESSION NUMBER: 134:17486 MARPAT

TITLE: Preparation of optically active 7-(pyrrolidin-1-

yl)quinolinecarboxylates and -

naphthyridinecarboxylates as antibacterials.

INVENTOR(S): Yoon, Sung June; Chung, Yong Ho; Lee, Chi Woo; Lee, Jin Soo; Kim, Nam Doo; Jin, Yoon Ho; Song, Wan Jin;

Kim, Ik Hoe; Yang, Wang Yong; Choi, Dong Rack; Shin,

Jung Han

PATENT ASSIGNEE(S): Dong Wha Pharm. Ind. Co., Ltd., S. Korea

SOURCE: PCT Int. Appl., 74 pp.

CODEN: PIXXD2

DOCUMENT TYPE: LANGUAGE:

PE: Patent English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

| | | | | | | • | | | | | | | | | | | |
|---------------|-----|-----|------------|-----|------|------|---------------|-------------------|-----|-----|-----|----------|------|-----|-----|-----|-----|
| PATENT NO. | | | KIND | | DATE | | | APPLICATION NO. D | | | | DATE | DATE | | | | |
| | | | | | | | | | | | | | | | | | |
| WO 2000071541 | | | A1 2000113 | | | 1130 | WO 2000-KR487 | | | | | 20000518 | | | | | |
| | W: | ΑE, | AG, | AL, | AM, | AT, | AU, | AZ, | BA, | BB, | BG, | BR, | BY, | CA, | CH, | CN, | CR, |
| | | CU, | CZ, | DE, | DK, | DM, | DZ, | EE, | ES, | FI, | GB, | GD, | GE, | GH, | GM, | HR, | HU, |
| | | ID, | IL, | IN, | IS, | JP, | KE, | KG, | KP, | KR, | KΖ, | LC, | LK, | LR, | LS, | LT, | LU, |
| | | LV, | MA, | MD, | MG, | MK, | MN, | MW, | MX, | NO, | NZ, | PL, | PT, | RO, | RU, | SD, | SE, |
| | | SG, | SI, | SK | | | | | | | | | | | | | |
| | RW: | GH, | GM, | KE, | LS, | MW, | MZ, | SD, | SL, | SZ, | TZ, | UG, | ZW, | AT, | BE, | CH, | CY, |
| | | DE, | DK, | ES, | FI, | FR, | GB, | GR, | IE, | ΙΤ, | LU, | MC, | NL, | PT, | SE, | BF, | ВJ, |
| | | CF, | CG, | CI, | CM, | GA, | GN, | GW, | ML, | MR, | NE, | SN, | TD, | TG | | | |
| | | | | | | | | | | | | | | | | | |

EP 1187835 20020320 EP 2000-927899 20000518 Α1 R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO 20000518 JP 2002500406 T2 20030107 JP 2000-619797 В2 20030213 757272 AU 2000-46209 20000518 6649763 В1 20031118 US 2001-979644 20011116 √US. PRIORITY APPLN. MFO.: KR 1999-18158 19990520 KR 2000-24657 20000509 WO 2000-KR487 20000518 GΙ

$$\begin{array}{c|c} & Y & O \\ \hline F & & \\ \hline RON & & \\ H_2N & & \\ \hline Me & & \\ \end{array}$$

AB Title compds. (I; Q = CH, CF, CCl, N; Y = H, NH2; R = alkyl, allyl, PhCH2), were prepd. Thus, (+)-7-(4-aminomethyl-4-methyl-3-oxopyrrolidin-1-yl)-1-cyclopropyl-6-fluoro-4-oxo-1,4-dihydro-1,8-naphthyridine-3-carboxylic acid hydrochloride (prepn. given) was stirred with methoxylamine hydrochloride in pyridine for 4 h to give 97.5% (-)-7-(4-aminomethyl-4-methyl-3-(Z)-methoxyiminopyrrolidin-1-yl)-1-cyclopropyl-6-fluoro-4-oxo-1,4-dihydro-1,8-naphthyridine-3-carboxylic acid hydrochloride. This showed a min. inhibitory concn. of 0.025 .mu.g/mL against Streptococcus pyogenes 308A.

Ι

MSTR 1

G1 = N MPL: claim 1

REFERENCE COUNT: 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6 ANSWER 2 OF 2 MARPAT COPYRIGHT 2003 ACS on STN ACCESSION NUMBER: 127:50548 MARPAT

10/600,631

TITLE: Preparation of aminomethylpyrrolidine derivatives as

bactericides

INVENTOR(S): Takemura, Makoto; Kimura, Yoichi; Kawakami, Katsuhiro;

Sugita, Kazuyuki; Oki, Hitoshi Daiichi Seiyaku Co., Ltd., Japan PATENT ASSIGNEE(S): SOURCE: Jpn. Kokai Tokkyo Koho, 16 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT:

PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|--------------------------|------|----------|-----------------|----------|
| | | | | |
| JP 09136886 | A2 | 19970527 | JP 1995-296643 | 19951115 |
| PRIORITY APPLN. INFO. GI | : | | JP 1995-296643 | 19951115 |

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

The title compds. [I; R1, R2 = H, (un)substituted C1-6 alkyl, etc.; R3-R5 = H, OH, halo, CONH2, C1-6 alkyl, etc.; R6-R9 = H, C1-6 alkyl; R10 = C1-6 alkyl, C2-6 alkenyl, etc.; R11 = H, C1-6 alkylthio, etc.; R12 = H, OH, NH2, C1-6 alkyl, C2-6 alkenyl, etc.; A1 = CX2; X2 = H, NH2, halo, halomethyl, etc.] are prepd. as bactericides. Thus, quinoline deriv. (II) (prepn. given) was reacted with pyrrolidine deriv. (III) (prepn. given) in the presence of Et3N and then treated with citric acid to give the title compd. (IV). IV showed MIC of .ltoreq. 0.003 .mu.g/mL when tested on S. aureus, 209P.

MSTR 1

$$G3 = CONH2$$
 $G5 = 16$

$$G7 = OH$$
 $G10 = 44$

10/600,631

G11 = cyclopropyl (SR (1-) G24)

G13 = X G17 = N

G17 = N G19 = OH

DER: and salts MPL: claim 1

=> d his

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FILE 'REGISTRY' ENTERED AT 09:48:33 ON 16 DEC 2003

L1 STRUCTURE UPLOADED

L2 1 S L1 SAM

L3 5 S L1 FULL

FILE 'CA' ENTERED AT 09:49:11 ON 16 DEC 2003

L4 1 S L3

FILE 'USPATFULL' ENTERED AT 09:49:43 ON 16 DEC 2003

L5 1 S L3

FILE 'MARPAT' ENTERED AT 09:49:52 ON 16 DEC 2003

L6 2 S L1 FULL

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STN INTERNATIONAL LOGOFF AT 09:50:23 ON 16 DEC 2003